flexor longus pollicis. This compound muscle, occupying the whole posterior surface of the bones of the leg, so pushes round the tibialis posticus, that it takes the chief part of its origin from the inner side of the tibia, which in Mammalia generally is free from muscular attachment. In the Paradoxurus I found that the flexor longus digitorum has, in addition to its usual attachments, a point of origin in the head of the fibula; but then the bones are separate, and the flexor longus pollicis is a distinct muscle, having also origin in both bones, and each tendon passes the ankle in its usual place*.

March 13, 1849.

W. Yarrell, Esq., Vice-President, in the Chair.

The Secretary reported that a living specimen of *Herpestes fasciatus*, Desm., and *Cœlogenys paca*, Linn., had just been added to the Society's collection. The former animal was exhibited to the Meeting.

The Secretary directed attention to a small series of skins of Mammalia and Birds collected in Ceylon and Sennaar by Aubrey Paul, Esq., the species of which were briefly noticed by Mr. Gray and Mr. Gould.

The following papers were read:—

1. Notice of a peculiarity of structure observed in the Aorta of the Wild Swan. By John Davy, M.D., F.R.S. L. & E., Inspector-General of Army Hospitals, etc. (Communicated by Mr. Gulliver.)

When engaged in examining anatomically this bird (a full-grown female, killed in the neighbourhood of Chatham in February 1839), my attention was arrested by a peculiar appearance in the inferior portion of its aorta, which I shall briefly describe with the hope of leading to further inquiry. Before the ischiatic arteries are given off, the aorta is comparatively large and is enveloped externally in a dense fibrous coat, possessing very little elasticity: below the origin of these

* Since writing the above I have taken opportunities of looking at the same muscles in a Fox and in a Monkey (*Cercopithecus pygerythrus*). The former animal differed from the Paradoxurus, and resembled the Jerboa, in the great extent of the flexor longus pollicis and the much-reduced size of the tibialis posticus, which here also terminates in a long slender tendon, showing an interesting correspondence of *adaptive* character in two animals, in which the motion of the hind-limbs is vigorous, but of one kind only. In the Monkey the flexor longus pollicis is a much larger muscle than the flexor longus digitorum, and has considerable attachment to the tibia.

Meckel and Cuvier allude to the union of the two long flexors in the Rabbit before they pass the ankle, but neither author informs us at which point that takes place.

arteries, the trunk of the aorta suddenly becomes small, and continues small and tapering to its termination; and this change is accompanied with an alteration in the structure of its external coat. In place of a dense fibrous envelope, it is now sheathed in a substance very like muscular fibre, and which from its properties I believe to be a muscular layer. It is of some thickness, of a reddish hue, slightly elastic, easily broken, and divided by a ligature and easily separated into longitudinal fibres of considerable length. Under the microscope each filament appears to be composed of nearly parallel fibres of extreme delicacy, and destitute of those peculiar markings which belong to the fibres of the voluntary muscles generally and to some of the involuntary. Moreover, when placed in a warm damp atmosphere, at a temperature between 80° and 90° Fahr., it rapidly putrefies and is reduced to a poultaceous or semifluid consistence. These properties seem to characterize it as a muscular structure; I would not dwell on any one in particular, but rather on the assemblage of them. An attempt of late has been made to revive the old doctrine of the muscularity of the middle coat of the arteries, founded almost exclusively on microscopical appearances. The structure described above, I consider not of the nature of the middle arterial coat, believing that that coat is not truly muscular, but rather of the nature of the muscular coat of the intestines, to which, in point of colour, consistence, the effect of a ligature, its microscopical appearance and proneness to putrefy, it is so very similar.

If this structure be admitted to be muscular, it may be viewed as accessory and of a use similar to that of the accessory hearts of the Chimæra and Torpedo, and destined to some peculiarity of function which further research is required to determine.

Before concluding this notice, I may mention incidentally that I availed myself of the opportunity afforded by this Swan to examine the air contained in its osseous air-cells. I found it to be composed of about 83·3 per cent. azote, and of 16·7 per cent. oxygen, tested by means of lime-water and phosphorus. It was collected from the cells belonging to the cervical vertebræ,—cells by means of which this part of the bird is happily buoyant, floating in water, even when deprived of its feathers and integuments and detached from the trachea. And, further, I may mention, which was new to me, that its large intestine is almost as amply provided with villi as its small; and that even the isthmus or narrow neck of each of its large cæca is similarly provided with villi. Some other animals, especially birds, may be analogous in this respect; but in no other instance in which I have yet examined the large intestines in search of villi have I found them.

2. Notes on the Skull of Equus Hemionus and Equus Kiang. By J. E. Gray, Esq., F.R.S.

Mr. Hodgson has lately sent to the British Museum three specimens of the Horse, which he had described under the name of *Equus Kiang*; unfortunately they were so destroyed by insects during their passage from India, that it was impossible to preserve any part of them except the skull and the bones of the limbs.

As a doubt had arisen as to the distinction of this species from the Hemione, *Equus Hemionus*, of Kutch, I have compared these skulls with the skull of the latter belonging to an imperfect skeleton, which was kindly presented to the Museum, with the skin, by the Earl of Derby, from an animal which lived some time in Knowsley Park.

The forehead of all the three specimens of *E. Kiang* is rather convex between the eyes, and the centre of the face is narrow and keeled on the sides; while in the skull of *E. Hemionus* the forehead is flat between the eyes, and the centre line of the face is rather broader and rounded gradually off on the sides, and the incisive bone is longer and more gradually arched, making the incisor more perpendicular in the latter than in any of the former.

But the most distinctive character between the four skulls is in the position of the infraorbital foramen. In *E. Hemionus* it is high up, about one-third the space between the face-line and the back edge of the teeth; it is far back, being directly over the front end of the cheek-ridge and the back edge of the third grinder: while in all the three specimens of the skulls of *E. Kiang* this foramen is lower down, being nearly in the centre of the space between the face-line and the base of the teeth, and it is placed in a line over the back edge of the second grinder, some distance in front of the end of the cheek-ridge.

The under surface of the body of the posterior sphenoid is narrow and convex in *E. Hemionus*, and broad and flat in *E. Kiang*. The vomer is much more compressed in the latter than in the *E. Hemionus*.

I am not certain that the distinctions here described may be sufficient to show that these two animals are separate species, but they indicate the necessity of the subject being more fully examined.

In the position of the suborbital foramen the *E. Kiang* more nearly resembles the *E. asinus*, and the *E. Hemionus* that of *E. Zebra* and *E. Burchellii*.

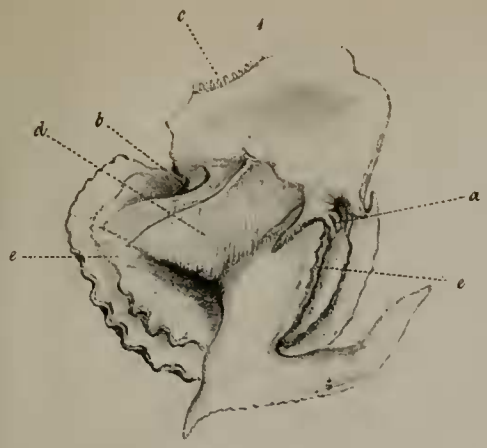
Two of the skulls of the *E. Kiang* show the small rudimentary grinder in front of the other; but this tooth is to be more or less distinctly observed in the skulls of the other *Equidæ* in the Museum collection. I may observe, that in the skull of *Equus Burchellii* in the British Museum collection, this tooth is placed on the inner side of the first true grinder.

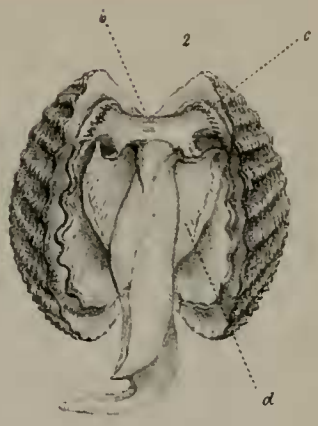
3. Description of the animal of Trigonia, from actual dissection. By G. Huxley, Esq., R.N., with an introductory note by Professor E. Forbes, F.R.S. etc. etc.

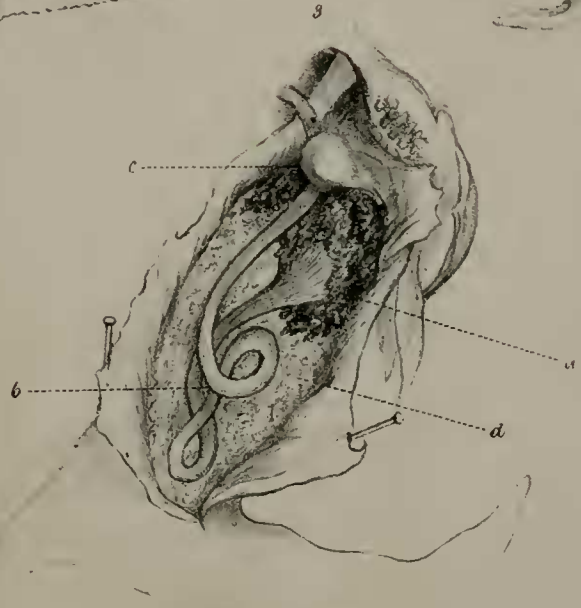
(Mollusca, Pl. III.)

The accompanying account of the animal of *Trigonia* was forwarded to me by Mr. Huxley, Assistant-Surgeon to the Rattlesnake, now surveying in the Eastern and Australian Seas, under the able command and scientific zeal of Capt. Owen Stanley.

The great number, beauty and geological importance of the species of this interesting genus have made especially valuable a knowledge of the structure of its animal. Quoy and Gaimard were the first to give any account of it, and a figure and description of the animal of





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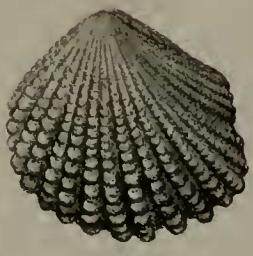
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T. H. Huxley
W. H. Baily

Hullmandel & Walton
Lithographers

1 2 3. TRIGONIA PECTINATA. p. 32
4 5 6. TRIGONIA JUKESII